



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,187	05/04/2001	Ramesh Nagarajan	13-10	9273
46363	7590	07/09/2007		
PATTERSON & SHERIDAN, LLP/ LUCENT TECHNOLOGIES, INC 595 SHREWSBURY AVENUE SHREWSBURY, NJ 07702			EXAMINER WILSON, ROBERT W	
			ART UNIT	PAPER NUMBER
			2616	
			MAIL DATE	DELIVERY MODE
			07/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/849,187

Applicant(s)

NAGARAJAN ET AL.

Examiner

Robert W. Wilson

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-10,14,15 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6, 8-10, 14, 15, & 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, 6, 8, 14, & 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Remein (U.S. Patent No.: 6,477,142).

Referring to claim 1, Remein teaches: a first type one node (38 per Fig 3) for grooming low capacity client signal into a high capacity signal (38 per Fig 3grooms 36a & 36b per Fig 3 (low capacity client signal) into SONET high capacity signal) comprising:

A first interface to a first high capacity trunk (port on 38 connected via path to 39 (first high capacity trunk)) for directly coupling to a type 1 node (Directly coupled is not defined in applicant's specification as directly connected; therefore, directly coupled has a broad meaning. 38; therefore, 38 (first type one node) is directly coupled to 39 (second type one node) via path between 38 and 39 per Fig 3)

A second interface to a second high capacity trunk for directly coupling to a type two node (second port on 38 (First type one node) is directly coupled to 34 (type 2 node) via path between 38 and 34 (second high capacity trunk))

Wherein only a portion of those low capacity client signals destined for the type one node are groomed into the second high capacity trunk to the type two node (36a per Fig 3 is the portion of the low capacity client signals which are destined for 39 per Fig 3 (type 1 node) which are groomed into the second high capacity trunk (35A per Fig 3 is a SONET trunk (2nd high capacity trunk))

In addition Remein teaches:

Regarding claim 3, wherein the type two node is a high traffic node (32 per Fig 3 is a SONET node and therefore a high traffic node)

Referring to claim 6, Remein teaches: an apparatus (38 per Fig 3) for performing selective grooming on client signals (36a & 36b per Fig 3), the apparatus comprising:

Art Unit: 2616

A first type one node (38 per Fig 3) coupled (a) directly to a second type one node via a first high capacity trunk (The applicant has not claimed directly connected. Directly coupled is not defined in applicant's specification as directly connected; therefore, directly coupled has a broad meaning. 38 per Fig 3 (First type one node) is directly coupled via path between 38 and 39 (second type one node) via a Fiber trunk which runs between 38 & 39 respectively. 38 has a port which the Fiber trunk between 38 & 39 (First High Capacity Trunk)) and (b) directly to a type two node (34 per Fig 3) via a second interface to a second high capacity trunk (Port on 38 (second interface) which is connected to the Fiber between 38 & 34 (second high capacity trunk) per fig 3) such that only a portion of the client signals destined for the second type one node are groomed into the second high capacity trunk to the type two node (36b is only a portion of the signals destined for 39 (second type one node) are groomed into Fiber between 38 & 34 (second high capacity trunk) of node 34 (Type 2 node))

In addition Remein teaches:

Regarding claim 8, wherein the second type one node (39 per Fig 3) is a low traffic node and the type two node (34 per Fig 3) is a high traffic node (The applicant broadly claims high traffic and low traffic nodes in the claim. The examiner has interpreted 34 per Fig 3 (Type node) as a high traffic node and 39 per Fig 3 2nd type one node) as a low traffic node))

Referring to claim 14, Remein teaches: a method for use in a first type one node (38 per Fig 3), the method comprising the steps of :

Receiving low capacity client signals (The applicant has broadly claimed low capacity client signals. 38 per Fig 3 receives 36a and 36b per Fig 3 which the examiner has interpreted as low capacity client signals)

Selectively grooming a portion of the received low capacity client signals into a first high capacity trunk directly coupled to a second type one node for transmission to the second type one node (36a per Fig 3 is the selectively groomed portion of the low capacity signal (combination of 36a & 36b) into path between 38 & 39 (high capacity trunk) which is directly coupled to 39 (second type 1 node) per Fig 3. Directly coupled is not defined in applicant's specification as directly connected; therefore, directly coupled has a broad meaning. 38 per Fig 3 selectively grooms 36a per Fig 3 which is a portion of 36a and 36b per Fig 3 which is a low capacity client signal into 35a per Fig 3 (first high capacity trunk) which is directly coupled to 39 via a path per Fig 3 (first type of node) for transmission of 36a per Fig 3 to 39 per Fig 3 (first type of node))

Transmitting other of the low capacity client signals over a second high capacity trunk directly coupled to a type two node (38 per Fig 3 transmits 36b per Fig 3 (other of low capacity client signal) over path between 38 & 34 per Fig 3 (second high capacity trunk) to 34 which is a type 2 node)

Wherein said other of the low capacity signals transmitted over the second high capacity trunk comprise low capacity client signals destined for the 2nd type one node (36b per Fig 3 (other of

Art Unit: 2616

the low capacity signals) transmitted over path between 38 & 34 per Fig 3 (2nd high capacity trunk) comprises low capacity signals destined for the second type of node (39 per Fig 3))

In addition Remein teaches:

Regarding claim 18, wherein the second type one node is a low traffic node and the first type two node is a high traffic node (The applicant broadly claims high traffic node and low traffic node 34 per Fig 3 (type 2 node) is a high traffic node because no traffic is broken out and 39 per Fig 3 (first type one node) is low traffic because traffic is broken out)

3. Claims 4, 9, & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Remein (U.S. Patent No.: 6,477,142) in view of the applicant's specification admitted prior art.

Referring to claim 4, Remein teaches the apparatus of claim 1.

Remein does not expressly call for: wherein the type one node is an enhanced cable station and the type two node is a central office.

The applicant's admitted prior art associated with Figure 1 teaches: cable station is one type of node (which the examiner has interpreted as enhanced) which is used to splice a path and central office is another type of node which is used to switch traffic.

It would have been obvious to one of ordinary skill in the art at the time to add the name enhanced cable station and central office of applicant admitted prior art the node 39 per Fig 3 or 2nd type 1 node and node 32 per Fig 3 or type 2 node of Remein because node 39 per Fig 3 or type 1 node drops and adds and 32 per Fig 3 or type 2 node splices lines.

Referring to claim 9, Remein teaches the apparatus of claim 6.

Remein does not expressly call for: wherein the second type one node is an enhanced cable station and the type two node is a central office

The applicant's admitted prior art associated with Figure 1 teaches: enhanced cable station (which the examiner has interpreted as enhance) is second type one node which is used to splice a path and central office is another type of node which is used to switch traffic.

It would have been obvious to one of ordinary skill in the art at the time to add the enhanced name cable station and central office of applicant admitted prior art the node 39 or second type one node per Fig 3 and node 38 per Fig 3 or first type one of Remein wherein the node 34 per Fig 3 is a Central Office because node 39 per Fig 3 is capable of switching traffic and wherein node 39 per Fig 3 or 2nd type one node is a cable station because 39 per Fig 3 splices a path .

Referring to claim 17, Remein teaches the apparatus of claim 14.

Art Unit: 2616

Remein does not expressly call for: wherein the second type one node is an enhanced cable station and the type two node is a central office.

The applicant's admitted prior art associated with Figure 1 teaches: cable station (which examiner has interpreted as enhanced cable station) is second type two node which is used to splice a path and central office is type two node which is used to switch traffic.

It would have been obvious to one of ordinary skill in the art at the time to add the name enhanced cable station and central office of applicant admitted prior art to the node 39 per Fig 3 or second type one node and node 34 per Fig 3 or type two node of Remein because node 39 per Fig 3 or type 1 node drops and adds and 32 per Fig 3 or type 2 node terminates lines.

4. Claims 5, 10, & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Remein (U.S. Patent No.: 6,477,142) in view of the Tyrrell (U.S. Patent No.: 5,185,736)

Referring to claim 5, Remein teaches: the apparatus of claim 1 and conversion of the low capacity client signals to the high capacity synchronous transport mode signal as synchronous transport mode signals

Remein does not expressly call for: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal

Tyrrell teaches: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal per Fig 7.

It would have been obvious to add the conversion pleischronous digital hierarchy signal to synchronous transport mode signal of Tyrrell to be performed on the low capacity client signals Remein in order to convert from one plesiochronous digital hierarchy which is one form of SONET to another synchronous transport module which is another form of SONET

Referring to claim 10, Remein teaches the apparatus of claim 6 and conversion of the low capacity client signals into the first high capacity trunk and the second high capacity trunk support a synchronous transport module signal (Fig 3 inherently supports STM)

Remein does not expressly call for: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal

Tyrrell teaches: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal per Fig 7.

Art Unit: 2616

It would have been obvious to add the conversion pleischronous digital hierarchy signal to synchronous transport mode signal of Tyrrell to be performed on the low capacity client signals Remein in order to convert from one plesiochronous digital hierarchy which is one form of SONET to another synchronous transport module which is another form of SONET

Referring to claim 15, Remein teaches the method of claim 14, and wherein the low capacity client signals compirse a first high capacity trunk and the second high capacity trunk each support a synchronous transport module signal (Fig 3 inherently supports STM)

Remein does not expressly call for: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal

Tyrrell teaches: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal per Fig 7.

It would have been obvious to add the conversion pleischronous digital hierarchy signal to synchronous transport mode signal of Tyrrell to be performed on the low capacity client signals Remein in order to convert from one plesiochronous digital hierarchy which is one form of SONET to another synchronous transport module which is another form of SONET

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Remein (U.S. Patent No.: 6,477,142) in view of Dravida (U.S. Patent No.: 5,253,248)

Referring to claim 19, Remein teaches the apparatus of claim 1 wherein grooming of the portion of those low capacity client signals destined for said second type one node into the second high capacity trunk to said type two node (Fig 3) and a type one node directly coupled to the second type one node(Fig 3)

Remein does not expressly call for: determining an aggregate amount of traffic between said first type one node and said second type one node; determining whether said aggregate amount of traffic between said first type one node and said second type one node exceeds a predetermined threshold, said predetermined threshold comprising a fraction of a capacity of said first high capacity trunk directly coupled said first type one node and said second type one node; and if said aggregate amount of traffic between said first type one node and said second type one nodes does not exceed said predetermined threshold, routing said amount of traffic from said first type one node over said second high capacity trunk to said second type two node or if said amount of traffic between said first type one node and said second type one node exceeds said predetermined threshold provisioning at least one additional high capacity trunk between said first type one node and said second type one node

Art Unit: 2616

Dravida teaches: determining an aggregate amount of traffic between said first type one node and said second type one node; determining whether said aggregate amount of traffic between said first type one node and said second type one node exceeds a predetermined threshold, said predetermined threshold comprising a fraction of a capacity of said first high capacity trunk directly coupled said first type one node and said second type one node; and if said aggregate amount of traffic between said first type one node and said second type one nodes does not exceed said predetermined threshold, routing said amount of traffic from said first type one node over said second high capacity trunk to said second type two node or if said amount of traffic between said first type one node and said second type one node exceeds said predetermined threshold provisioning at least one additional high capacity trunk between said first type one node and said second type one node (determining an aggregate amount of traffic between said first type one node and said second type one node; determining whether said aggregate amount of traffic between said first type one node and said second type one node exceeds a predetermined threshold, said predetermined threshold comprising a fraction of a capacity of said first high capacity trunk directed coupled per col. 3 lines 10-45. Adding an additional route when the congestion exceeds a threshold which the examiner interprets provisioning at least one additional trunk between said another type one node and said type one node per col. 3 lines 10-45)

It would have been obvious to add thresholding and provisioning of additional trunk of Dravida to the apparatus of the combination of Remein and Dravida in order to balance the traffic between the two nodes thus improving the performance.

Response to Amendment

6. Applicant's arguments filed 5/4/07 have been fully considered but they are not persuasive.

The examiner respectively disagrees with the applicant argument that the reference Remein does not teach: a first interface to a first high capacity trunk for directly coupling to a second type one node and a second interface to a second high capacity trunk for directly coupling to a type two node.

Remein teaches: A first interface to a first high capacity trunk (port on 38 connected via path to 39 (first high capacity trunk)) for directly coupling to a type 1 node (Directly coupled is not defined in applicant's specification as directly connected; therefore, directly coupled has a broad meaning; therefore, 38 (first type one node) is directly coupled to 39 (second type one node) via path between 38 and 39 per Fig 3)

A second interface to a second high capacity trunk for directly coupling to a type two node (second port on 38 (First type one node) is directly coupled to 34 (type 2 node) via path between 38 and 34 (second high capacity trunk))

Art Unit: 2616

The first and second interfaces are interpreted as reading on ports. The applicant's specification does not define directly coupled as meaning directly connected. The applicant intentionally has not used the wording in the claim directly connected; therefore, the examiner has interpreted directly coupled as reading on a path between two devices.

The examiner respectively disagrees with the applicant's argument that directly coupled is a synonym with directly connected. Couple means indirect connection. The applicant argument that directly coupled is a synonym with directly connected is not persuasive.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075.

The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571/272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Robert W Wilson
Examiner
Art Unit 2616

RWW
6/29/07

EDAN.ORGAD
PRIMARY PATENT EXAMINER

